



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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Ref: 8WD-CWQ

OCT - 8 2019

Mr. Kevin Greer, Chair
Water Quality Control Commission
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

Re: EPA Approval of New and Revised WQS (Regulation #33 and #37)

Dear Mr. Greer:

The U.S. Environmental Protection Agency Region 8 (EPA or Region) has completed its review of the changes to water quality standards (WQS) adopted by Colorado's Water Quality Control Commission (Commission) on August 12, 2019. The Commission adopted new and revised WQS for segments in the Upper Colorado River Basin and North Platte River (Regulation #33) and the Lower Colorado River Basin (Regulation #37). Generally, changes were adopted to use classifications, narrative and numeric standards, temporary modifications, and segment descriptions. The public review process included three hearings, culminating with the rulemaking hearing in Grand Junction, Colorado on June 10 and 11, 2019. The proposed changes and supporting analyses were available to the public on March 13, 2019. The submission letter included an Opinion of the Attorney General certifying that the standards were duly adopted pursuant to State law. Receipt of the new and revised WQS on September 23, 2019 initiated the EPA's review pursuant to Clean Water Act (CWA) § 303(c). The EPA has completed its review, and this letter is to notify you of our action.

CLEAN WATER ACT REVIEW REQUIREMENTS

CWA § 303(c)(2) requires States and authorized Indian Tribes¹ to submit new or revised WQS to the EPA for review. The EPA is required to review and approve or disapprove the revisions. Pursuant to CWA § 303(c)(3), if the EPA determines that any WQS is not consistent with the applicable requirements of the Act, the Agency shall, not later than the ninetieth day after the date of submission, notify the State or authorized Tribe and specify the changes to meet the requirements. If the changes are not adopted within ninety days after the date of notification, the EPA is to propose and promulgate such WQS pursuant to CWA § 303(c)(4). The Region's goal has been, and will continue to be, to work closely with States and authorized Tribes throughout the standards revision process so that submitted revisions can be approved by the EPA. Pursuant to 40 C.F.R. § 131.21(c), new or revised state standards submitted after May 30, 2000, are not effective for CWA purposes until approved by the EPA.

¹ CWA § 518(e) specifically authorizes EPA to treat eligible Indian tribes in the same manner as states for purposes of CWA § 303. See also 40 C.F.R. § 131.8.

TODAY'S ACTION

EPA approves all new and revised WQS adopted on August 12, 2019. The WQS revisions approved today are summarized in Table 1 and discussed in the enclosures.

| Table 1 Categories of New and Revised Colorado WQS Regulation #33 and #37 | | |
|---|---|------------|
| Regulation | Category | EPA Action |
| <i>Water Supply, Human Health, Recreation, and Agriculture WQS</i> | | |
| 33 and 37 | Changes to water supply uses and human health-based standards | Approved |
| 33 and 37 | Changes to temporary modifications (water supply uses) | Approved |
| 33 and 37 | Changes to recreation uses and standards | Approved |
| 33 and 37 | Changes to agriculture uses and standards | Approved |
| <i>Aquatic Life WQS</i> | | |
| 33 and 37 | Changes to aquatic life use classifications | Approved |
| 33 and 37 | Changes to aquatic life standards | Approved |
| 33 and 37 | Changes to temporary modifications (aquatic life uses) | Approved |

INDIAN COUNTRY

The WQS approvals in today's letter do not extend to Indian country as defined in 18 U.S.C. § 1151. Today's letter is not intended as an action to approve or disapprove water quality standards applying to waters within Indian country. The EPA, or eligible Indian tribes, as appropriate, will retain responsibilities for water quality standards for waters within Indian country.


ENDANGERED SPECIES ACT REQUIREMENTS

The EPA's approval of Colorado's WQS is considered a federal action which may be subject to the Section 7(a)(2) consultation requirements of the Endangered Species Act (ESA). Section 7(a)(2) of the ESA states that "each federal agency ... shall ...insure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined to be critical..." The EPA has initiated consultation under ESA Section 7(a)(2) with the U.S. Fish and Wildlife Service (Service) regarding our approval of the new or revised WQS. The EPA also has a CWA obligation, as a separate matter, to complete its WQS action. Therefore, in acting on the state's WQS today, EPA is completing its CWA § 303(c) responsibilities. However, because ESA consultation on the EPA's approval of certain standards is ongoing, for such revisions the EPA's approval is made subject to the outcome of the ESA consultation process. EPA's approval does not foreclose either the formulation by the Services, or the implementation by EPA, of any alternatives that might be determined in the consultation to be needed to comply with section 7(a)(2). EPA retains the full range of options available under CWA §303(c) for ensuring water quality standards are environmentally protective.

CONCLUSION

We thank the Commission for its efforts to improve the water quality standards that protect the waters of Colorado. Questions regarding this action may be directed to David Moon at (303) 312-6833.

Sincerely,

A handwritten signature in black ink, appearing to read 'Darcy O'Connor', with a long horizontal flourish extending to the right.

Darcy O'Connor, Director
Water Division

Enclosures (2)

- Enclosure 1 - Rationale for EPA's Action on the Regulation #33 WQS Revisions
- Enclosure 2 - Rationale for EPA's Action on the Regulation #37 WQS Revisions

ENCLOSURE 1
RATIONALE FOR EPA’S ACTION ON THE REGULATION #33 REVISIONS

The discussion below summarizes the changes to Classifications and Numeric Standards for the Upper Colorado River Basin and North Platte River (Regulation #33) and the rationale for the EPA’s approval action.

Revisions were adopted to the water quality standards (WQS) assigned to individual segments. The revisions included updates to Regulation #33 to make it consistent with the *Basic Standards and Methodologies for Surface Water* (Regulation #31), as revised by the Commission in 2016.

The EPA reviewed and carefully considered the rule changes, the Statement of Basis and Purpose adopted by the Commission, and all documents and information submitted to the Commission during the State’s rulemaking process, including the proponent’s pre-hearing statements and exhibits, responsive pre-hearing statements and exhibits, rebuttal statements and exhibits, and public comments.

WATER SUPPLY, HUMAN HEALTH, RECREATION AND AGRICULTURE WQS

All WQS revisions in this category are approved without condition. The basis for the EPA’s approval action is that the revisions are consistent with the requirements of the Clean Water Act and the EPA’s implementing regulation.

Water Supply Use Classifications and Human Health-Based Standards

Changes to water supply use classifications and human health-based standards included the following:

- For Yampa River segment 5 (Phillips Creek), 11, and 13e, a water supply use classification and the associated (EPA approved) numeric table value standards were assigned. For Yampa River segment 13c, the previously-adopted water supply use classification and standards were extended from seasonal to year-round. These segment-specific WQS changes are important for the protection of water supply uses, and are especially meaningful for parameters where the numeric standards associated with a water supply use classification are more stringent than those associated with an aquatic life or agriculture use classification (e.g., inorganic/metal parameters such as nitrate and arsenic). The water supply classifications and standards will enhance source water protection efforts in these watersheds. The Region finds that the revisions are consistent with 40 C.F.R. § 131.10(a).
- The water supply use classification and associated numeric standards were removed from Upper Colorado River segment 7e (lower Muddy Creek) based on evidence that water supply uses currently do not exist and are not expected in the future. The Region concludes that the supporting analysis (WQCD Exhibit C and Exhibit 33-4) appropriately justifies removal of the water supply use classification i.e., based on consideration of the use and value of these segments for water supply uses. Accordingly, the Region finds that the revisions are consistent with 40 C.F.R. § 131.10(a) and § 131.10(k)(3).
- To assure protection of human health, and in support of the CWA § 101(a)(2) goal, more stringent health-based standards assuming fish ingestion were applied to Eagle River segment 11 (Alkali Creek, Milk Creek). Consistent with section 31.11(3), footnote 3, of the *Basic Standards and Methodologies for*

Surface Waters, the Division’s proposal was based on evidence that this Aquatic Life Class 2 segment supports fish that are of a catchable size and which are normally consumed, and “fishing takes places on a recurring basis” (WQCD Exhibit 33-1).

- Numeric water supply-based (and EPA approved) table value standards for cadmium, lead and nickel were applied to various segments as necessary to assure that a full set of numeric standards is in place for protection of the water supply use classification. Such standards were applied to Upper Colorado River segments 1, 2, 3, 4, 5, 6a, 7a, 7b, 7c, 7d, 8, 9, 10a, 10b, 10c, 11, 12, and 13, Blue River segments 1, 2a, 2b, 2c, 4a, 4b, 6a, 6b, 8, 9, 10, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, and 23, Eagle River segments 1, 2, 3, 4, 5a, 5b, 5c, 6, 7a, 7b, 8, 9a, 9b, 9c, 10a, 10b, 12, 13, and 14, Roaring Fork River segments 1, 2, 3a, 3b, 3c, 3d, 4, 5, 6, 7, 8, 9, 10a, 10b, 11, and 12, North Platte River segments 1, 2, 3, 4a, 4b, 5a, 5b, 6, 8, and 9, and Yampa River segments 1, 2a, 2b, 3, 4, 5, 6, 7, 8, 11, 13a, 13c, 13e, 13f, 14, 15, 18, 19, 20a, 20b, 21, 22, and 23.

The Region concludes that all revisions to water supply use classifications and human health-based standards are consistent with the EPA’s water quality standards regulation at 40 C.F.R. §§ 131.10 and 131.11.

Temporary Modifications (Water Supply Use Classifications)

Temporary modifications for the arsenic water + fish standard were deleted for Blue River segment 12, Eagle River segments 1 and 4, Roaring Fork River segment 1, and Yampa River segment 1. New temporary modifications for the arsenic water + fish standard (expiration 12/31/2021) were applied to Yampa River segments 5 and 11, based on a demonstration that the factual situation satisfies all 31.7(3) eligibility requirements (WQCD Pre-hearing Statement and Exhibit 33-1). For Yampa River segment 13c, the previously-adopted seasonal temporary modification for the arsenic water + fish standard was extended to year-round application, consistent with the change to the water supply use classification (WQCD Pre-hearing Statement and Exhibit 33-1). The revisions are consistent with the EPA-approved general policy regarding temporary modifications in *Basic Standards and Methodologies for Surface Waters* (Regulation #31, Section 31.7(3)). The EPA regulation at 40 C.F.R. § 131.13 provides that such general policies may be adopted at State discretion and are subject to the EPA’s review and approval. Colorado’s general policy authorizing temporary modifications has been approved by the EPA on multiple occasions, and most recently on October 2, 2017.

Recreation Use Classifications and Standards

Based on evidence that all or portions of the segment are accessible to the public and located in a developed area where there is access for children, the recreation use was upgraded from Rec N to Rec E for Upper Colorado River segment 7a, portions of 7b (Blacktail Creek and certain tributaries to Muddy Creek), Blue River segment 7, Roaring Fork River segment 3b, and North Platte River segment 7b. For each of these segments, the table value standards for *E. coli* (126 per 100 ml as a 2-month geometric mean) and chlorophyll-a (150 mg/m² as a July 1 – September 30 maximum, not to exceed) were also applied to protect recreation uses. In addition, Yampa River segment 20a was upgraded from Rec U to Rec E (with no change to numeric standards because the table values for Rec U and Rec E are the same). The Region concludes that these revisions to recreation use classifications and standards are consistent with EPA’s water quality standards regulation at 40 C.F.R. § 131.10 and 131.11.

Agriculture Use Classifications and Standards

The (EPA approved) table value standard for trivalent chromium (100 µg/L) was applied to Yampa River segments 13g, 13h, and 13i for the protection of agriculture uses. In addition, a molybdenum numeric standard of

150 µg/L was applied to segments with an agriculture use classification where livestock or irrigated forage are present or expected to be present (WQCD Exhibit B). This molybdenum numeric standard is consistent with WQS revisions that were adopted for the South Platte River basin (2015), San Juan River basin (2017), Gunnison River basin (2017), Arkansas River Basin (2018) and Rio Grande Basin (2018), all of which were approved by EPA. The Region concludes that these revisions to agriculture standards are consistent with EPA’s water quality standards regulation at 40 C.F.R. § 131.11.

AQUATIC LIFE USES

All WQS revisions in this category are approved. The basis for the EPA’s approval action is that the revisions are consistent with the requirements of the Clean Water Act and the EPA’s implementing regulation.

Aquatic Life Use Classifications

The aquatic life use classification for Yampa River segment 11 was upgraded from Cold 2 to Cold 1. This segment consists of Fish Creek, including all tributaries and wetlands, from the source to County Road 27, except for specific listings in Segment 20a. Generally, Class 1 uses are appropriate for segments such as Fish Creek that are capable of supporting a wide variety of biota, including sensitive species, or could sustain such biota if not for correctable water quality conditions. Adoption of the WQS revision was supported by multiple lines of evidence, including macroinvertebrate, fish population, and ambient stream temperature monitoring data (WQCD Exhibit 33-1).

The Region concludes that the revision is consistent with the EPA’s water quality standards regulation at 40 C.F.R. § 131.10. The revision is approved, subject to ESA consultation.

Aquatic Life Standards

Changes to aquatic life-based standards included the following:

- The acute and chronic numeric temperature values at 33.6(3) were revised consistent with the changes to Regulation 31, Table I, that were adopted in 2016 and approved by EPA’s October 2, 2017 action letter. Because they are consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.
- Updated hardness-dependent aquatic life numeric standards for cadmium were assigned to Blue River segments 2c, 4a, 6a, 7, 11, and 12, and Eagle River segments 2, 5a (acute), 5c (acute), and 6. The revised standards are based on the updated CWA § 304(a) criteria recommendations finalized by EPA in 2016. Because they are consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.
- Additional aquatic life protection standards were assigned to the following segments: Upper Colorado River segments 4 (sculpin zinc), 6a (sculpin zinc), 6b (full set), and 7c (sculpin zinc), Eagle River segment 11 (full set), and Yampa River segments 4 (full set), 11 (full set), 12 (full set) and 19 (selenium). The additional numeric standards will enhance protection of aquatic life uses in these watersheds (e.g., in cases where a new/expanded discharge is proposed). Because they are based on table values previously

approved by EPA, and consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.

- More stringent temperature standards based on protection of mountain whitefish were added to certain segments where thermally-sensitive mountain whitefish are known to occur. This results in more-stringent numeric temperature standards for the months of April, May, and October and does not affect the EPA-approved numeric standards for water temperature already in place for other months. Segments where such standards were applied include Upper Colorado River segments 3 and 7a, Roaring Fork River segment 3c, and Yampa River segments 2b, 13b, and 13f. Because they are based on table values previously approved by EPA, and consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.
- More stringent temperature standards based on protection of lake trout were added to certain segments where lake trout are known to occur, except that such standards were not applied if a site-specific acute or chronic temperature standard was already in effect. Application of lake trout standards results in more stringent chronic (16.6 °C instead of 17 °C) requirements where a “cold lake” temperature tier applies, and more stringent acute (22.4 °C instead of 24.2 °C) and chronic (16.6 °C instead of 18.3 °C) requirements where a “cold large lake” temperature tier applies. Lake trout standards were added to Upper Colorado River segments 11 (Rim Lake - chronic), 12 (Grand Lake - acute and chronic, Lake Granby - acute), and 13 (Deep Lake - chronic, Williams Fork Reservoir - acute), Blue River segment 23 (Green Mountain Reservoir - acute and chronic), and North Platte River segments 8 (Blue Lake, Lower Big Twin Lake, and Katherine Lake - chronic) and 9 (Upper Big Creek Lake and Lower Big Creek Lake - acute and chronic, Agua Fria Lake - chronic). Because they are based on table values previously approved by EPA, and consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.
- Site-specific revisions to temperature standards were adopted for a number of segments based on a review of multiple lines of evidence including the existing and expected fish community, the existing thermal regime, anthropogenic influences on the thermal regime, and whether such influences are reversible. See Table 2. For several segments, the standards were modified based on the thermal requirements of the existing and expected fish community. Because they are consistent with 40 C.F.R. § 131.11, these WQS revisions are approved, subject to ESA consultation.

| Table 2. Site-Specific Revisions to Temperature Standards Regulation #33 | | |
|---|--|---|
| Type of Proposed Revision | Segments | Notes |
| Ambient Quality-Based Temperature Standards | none | |
| Revisions to Temperature Tiers | Roaring Fork 3a (Threemile Creek) Upper Colorado 5 Upper Colorado 7d, 7e | CS-II to CS-I. WQCD Exhibit 33-1. CS-I to CS-II. WQCD Exhibit 33-2. CS-I to CS-II. WQCD Exhibit 33-3. |

- Consistent with the requirements of CWA § 303(c)(2)(B), the Blue River Segment 11 (French Gulch) narrative “existing quality” standard for dissolved lead was deleted and replaced with (EPA-approved) acute and chronic aquatic life table value standards. Because they are based on table values previously approved by EPA, and consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.

Temporary Modifications (Aquatic Life Use Classifications)

For Yampa River segment 2b, a temporary modification for the chronic temperature standard was adopted for the months of July, August, September, and November with a 5-year duration (until the December 31, 2024 expiration date) and a narrative operative value of “current conditions.” For the other eight months (January – June, October, December) no temporary modification for the chronic temperature standard was adopted.

A plan to resolve the uncertainty was submitted (Steamboat Springs Exhibit 9) that includes enhancement of riparian shading and canopy cover, evaluation of options to enhance river flows through releases from Stagecoach Reservoir, temperature monitoring and modeling, characterization of sources and causes, and an alternatives analysis for the City’s wastewater treatment facility. The alternatives analysis work is important, in EPA’s view, because it will support decisions regarding the extent to which the temperature of the City’s wastewater discharge can be reduced.

The Statement of Basis and Purpose adopted by the Commission explains that:

“The operative value of the temporary modification is the narrative “current conditions.” In future reviews, the Commission will consider the need for changes to all elements of the temporary modification, including the operative value. Because the Division is now working to develop methods to support derivation of numeric operative values and effluent limits, the Commission anticipates that numeric operative values are likely to be adopted in the future as more data become available to characterize spatial and temporal variability in effluent and instream temperature conditions” (underline added).

The revisions are consistent with the general policy regarding temporary modifications in *Basic Standards and Methodologies for Surface Waters* (Regulation #31, Section 31.7(3)). The EPA’s regulation at 40 C.F.R. § 131.13 provides that such general policies may be adopted at State discretion, subject to the EPA’s review and approval. Colorado’s general policy authorizing temporary modifications has been approved by the EPA on multiple occasions, and most recently on October 2, 2017. EPA Region 8 approves the new temporary modification for Yampa River segment 2b, subject to ESA consultation.

ENCLOSURE 2
RATIONALE FOR EPA’S ACTION ON THE REGULATION #37 REVISIONS

The discussion below summarizes the changes to Classifications and Numeric Standards for the Lower Colorado River (Regulation #37) and the rationale for the EPA’s approval action.

Revisions were adopted to the water quality standards (WQS) assigned to individual segments. The revisions included updates to Regulation #37 to make it consistent with the *Basic Standards and Methodologies for Surface Water* (Regulation #31), as revised by the Commission in 2016.

The EPA reviewed and carefully considered the rule changes, the Statement of Basis and Purpose adopted by the Commission, and all documents and information submitted to the Commission during the State’s rulemaking process, including the proponent’s pre-hearing statements and exhibits, responsive pre-hearing statements and exhibits, rebuttal statements and exhibits, and public comments.

WATER SUPPLY, HUMAN HEALTH, RECREATION, AND AGRICULTURE WQS

All WQS revisions in this category are approved without condition. The basis for the EPA’s approval action is that the revisions are consistent with the requirements of the Clean Water Act and the EPA’s implementing regulation.

Water Supply Use Classifications and Human Health-Based Standards

Changes to water supply use classifications and human health-based standards included the following:

- Water supply use classifications and the associated (EPA approved) numeric table value standards were assigned to Lower Yampa/Green River segment 3a and Lower Colorado River segments 9a and 13a. These segment-specific WQS revisions are important for the protection of water supply uses and are especially meaningful for parameters where the numeric standards associated with a water supply use classification are more stringent than those associated with an aquatic life or agriculture use classifications (e.g., inorganic/metal parameters such as nitrate and arsenic). The new water supply standards will enhance source water protection efforts in these watersheds. The Region finds that the revisions are consistent with 40 C.F.R. § 131.10(a).
- In support of the CWA § 101(a)(2) goal and to assure protection of human health, more stringent health-based standards that assume water and fish ingestion were assigned to Lower Yampa/Green River segments 3a and 16 and White River segment 9d, and more stringent health-based standards that assume fish consumption only were assigned to White River segments 13c and 15, and Lower Colorado River segment 13b. Consistent with section 31.11(3), footnote 3, of the *Basic Standards and Methodologies for Surface Waters*, the Division’s proposal was based on evidence that these Aquatic Life Class 2 segments support fish that are of a catchable size and which are normally consumed, and “fishing takes places on a recurring basis” (WQCD Exhibit 37-1).
- Numeric water supply-based (and EPA approved) table value standards for cadmium, lead and nickel were applied to various segments as necessary to assure that a full set of numeric standards is in place for

protection of the water supply use classification. Such standards were applied to Lower Yampa/Green River segments 2, 3c, 3e, 3h, 4, 5, 6, 8, 9, 10, 12a, 12c, 13a, 13b, 15, 16, 18, 19a, 19b, 21, 25, 27, 28, 29, 31, and 33, White River segments 1, 3, 4a, 4b, 6, 7, 8, 9a, 9b, 9c, 9d, 10a, 10b, 11, 12, 13b, 14a, 16a, 18b, 20, 21, 23, 24, 25, and 26, and Lower Colorado River: 1, 2a, 2b, 4a, 4c, 4d, 5, 6, 7a, 7b, 8, 9b, 9c, 10, 11a, 11c, 12b, 13f, 14a, 14b, 14c, 15a, 15b, 15c, 15d, 16, 17a, 17b, 18, 19, 20, and 21.

The Region concludes that all revisions to water supply use classifications and health-based standards are consistent with the EPA’s water quality standards regulation at 40 C.F.R. §§ 131.10 and 131.11.

Temporary Modifications (Water Supply Use Classifications)

A temporary modification for the arsenic water + fish standard was deleted from Lower Yampa/Green River segment 12b. In addition, new temporary modifications for the arsenic water + fish standard were applied to Lower Yampa/Green River segments 3a and 16, and White River segment 9d (expiration 12/31/2021), based on a demonstration that the factual situation satisfies all eligibility requirements (WQCD Pre-hearing Statement and Exhibit 37-1). The revisions are consistent with the (EPA-approved) general policy regarding temporary modifications in *Basic Standards and Methodologies for Surface Waters* (Regulation #31, Section 31.7(3)). The EPA’s regulation at 40 C.F.R. § 131.13 provides that such general policies may be adopted at State discretion, subject to the EPA’s review and approval. Colorado’s general policy authorizing temporary modifications has been approved by the EPA on multiple occasions, and most recently on October 2, 2017.

Recreation Use Classifications and Standards

The recreation use classification was upgraded from Rec P to Rec E for Lower Colorado River segments 14b and 14c, and from Rec N to Rec E for White River segments 9c and 9d. For each of these segments, where they were not already in effect, the table value standards for E. coli (126 per 100 ml as a 2-month geometric mean) and chlorophyll-a (150 mg/m² as a July 1 – September 30 maximum, not to exceed) were also applied to protect recreation uses. The recreation classification was upgraded from Rec N to Rec P for Lower Yampa/Green River segments 3a, 3d, 3h, 17b, 17c, 21, 22a, and 22b, White River segments 9a, 9b, 13a, 16a, 16b and 18a, and Lower Colorado River segments 4d and 11a. For each of these segments, the table value standards for E. coli (205 per 100 ml as a 2-month geometric mean) and chlorophyll-a (150 mg/m² as a July 1 – September 30 maximum, not to exceed) were also applied to protect recreation uses. The Region concludes that these revisions to recreation use classifications and standards are consistent with EPA’s water quality standards regulation at 40 C.F.R. § 131.10 and 131.11.

Agriculture Use Classifications and Standards

The (EPA approved) table value standard for boron (0.75 µg/L) was applied to Lower Yampa/Green River segments 3b and 3i for the protection of agriculture uses. In addition, a molybdenum numeric standard of 150 µg/L was applied to segments with an agriculture use classification where livestock or irrigated forage are present or expected to be present (WQCD Exhibit B). This molybdenum numeric standard is consistent with WQS revisions that were adopted for the South Platte River basin (2015), San Juan River basin (2017), Gunnison River basin (2017), Arkansas River Basin (2018) and Rio Grande Basin (2018), all of which were approved by EPA. The Region concludes that these revisions to agriculture standards are consistent with EPA’s water quality standards regulation at 40 C.F.R. § 131.11.

AQUATIC LIFE WQS

All WQS revisions in this category are approved. The basis for the EPA’s approval action is that the revisions are consistent with the requirements of the Clean Water Act and the EPA’s implementing regulation.

Aquatic Life Use Classifications

Certain Colorado River tributaries were moved to Lower Colorado River segment 11a, thereby upgrading the aquatic life use classification from Cold 2 to Cold 1. Previously, portions of the East Fork of Parachute Creek (designated as Cold 2) were included in segment 11e, and certain tributaries to the East Fork of Parachute Creek (designated as Cold 2) were included in segment 11g. The Commission decided to move these water bodies to segment 11a, which has an Aquatic Life Cold 1 use classification. The use upgrade was supported by the Division’s review of the biology, physical characteristics, and water quality conditions (WQCD Exhibits 37-1 and 37-4) including information that Colorado River cutthroat, brook, brown rainbow, and cutthroat trout are present in the segment. The Region concludes that the WQS revision is consistent with the EPA’s regulation at 40 C.F.R. § 131.10. The revision is approved, subject to ESA consultation.

The aquatic life use classification for the lower portion of Wallace Creek was upgraded from Cold 2 to Cold 1. Previously, the upper portion of Wallace Creek (designated as Cold 1) was included in Lower Colorado segment 5, and the lower portion (designated as Cold 2) was included in segment 12b. The Commission decided to move both portions to new segment 12c and assign a Cold 1 use classification. The new segment 12c consists of Wallace Creek, including all tributaries and wetlands, from the source to the confluence with the Colorado River. The revision is based on information indicating that a Class 1 fish population has been observed throughout Wallace Creek (WQCD Exhibits 37-1 and 37-4) including brook, rainbow, and Colorado River cutthroat trout. The Region concludes that the WQS revision is consistent with the EPA’s regulation at 40 C.F.R. § 131.10. The revision is approved, subject to ESA consultation.

Aquatic Life Standards

Changes to numeric standards for the protection of aquatic life classifications included the following:

- The acute and chronic numeric temperature values at 37.6(3) were revised consistent with the changes to Regulation 31, Table I, that were adopted in 2016 and approved by EPA’s October 2, 2017 action letter. Because they are consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.
- An updated hardness-dependent numeric standard for cadmium was assigned to Lower Colorado River segment 4e (chronic only). The revised standard is consistent with the updated CWA § 304(a) criteria recommendations finalized by EPA in 2016. Because they are consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.
- Additional aquatic life numeric standards were assigned to the following segments: Lower Yampa/Green River segment 3a (full set), 3b (acute chlorine, nitrite), 3f (full set), 3i (acute chlorine, nitrite), 17b (full set), 17c (nitrite), 20 (full set), and 22d (full set), White River segments 13a (full set), 13c (nitrite), 13d (nitrite), and 22 (full set), and Lower Colorado River segments 11a (certain tributaries, certain parameters,

as necessary to protect the upgraded Cold 1 use classification), 11b (full set), 13a (acute and chronic chlorine, nitrite), and 15d (trout-based acute cadmium, trout-based chronic silver). The additional numeric standards will enhance protection of aquatic life uses in these watersheds (e.g., in cases where a new/expanded discharge is proposed). Because they are based on (EPA approved) table values, and consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.

- More stringent temperature standards based on protection of mountain whitefish were added to Lower Colorado River segment 1 because thermally-sensitive mountain whitefish are known to occur. This results in more-stringent numeric temperature standards for the months of April, May, and October and does not affect the EPA-approved numeric standards for water temperature already in place for other months. Because they are based on (EPA approved) table values, and consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.
- Temperature standards for the lower portion of Wallace Creek (Lower Colorado River segment 12c) were upgraded from the CS-II table values to the (more stringent) CS-I table values, based on the evidence described in WQCD Exhibit 37-1 and 37-4. This is consistent with the application of an upgraded aquatic life use classification (Cold 2 to Cold 1). Because they are based on (EPA approved) table values, and consistent with 40 C.F.R. § 131.11, these revisions are approved, subject to ESA consultation.
- Lower Yampa River Segment 3g. Previous to this rulemaking, a very limited set of aquatic life-based numeric standards (pH and dissolved oxygen only) was assigned to Lower Yampa River segment 3g (Collom Gulch, Little Collom Gulch, Ben Morgan Creek, Boxelder Gulch, Hale Gulch, and Jubb Creek). In this rulemaking, with the exception of Little Collom Gulch and the upper portion of Collom Gulch, the Commission decided to apply a full set of (EPA approved) aquatic life table values. For the upper portion of Collom Gulch, a full set of table values was applied, with the exception that a spring runoff season ambient quality-based standard for total recoverable iron (1,500 µg/L) was applied during the months of March, April, and May. The table value for total recoverable iron (1,000 µg/L) was applied to upper Collom Gulch during the non-runoff season (June – February) and to the remainder of segment 3g on a year-round basis. Little Collom Gulch (a tributary of Collom Gulch) was moved to new Segment 3j, but no additions or changes to the aquatic life numeric standards were adopted.

Regarding the upper portion of Collom Gulch, the runoff season ambient quality-based standard for total recoverable iron (1,500 µg/L) proposed by Tri-State Generation and Transmission Association, Inc. was supported by a use attainability analysis (Tri-State Exhibit 7). The UAA concludes that “elevated Fe concentrations are likely the result of natural erosional processes occurring when storm-generated flows mobilize accumulated sediment from the streambed and/or streambanks” (page 19) and that naturally occurring Fe concentrations “fluctuate based on seasonally elevated flows” (page 21). The Statement of Basis and Purpose documents the Commission’s conclusion that “natural sources within the Collom Gulch drainage are solely driving elevated instream concentrations of total recoverable iron during the spring runoff season.”

The EPA concludes that the site-specific iron standard is consistent with the (EPA-approved) general policy regarding ambient quality-based standards in *The Basic Standards and Methodologies for Surface Waters* (Regulation #31, Section 31.7(1)(b)(ii)), including the requirement for a comprehensive supporting analysis that, e.g., “identifies the sources and causes of the elevated levels and characterizes

existing conditions, including spatial and temporal variation.” The EPA rule at 40 C.F.R. § 131.13 provides that such general policies may be adopted at State discretion, subject to the EPA’s review and approval. Colorado’s general policy authorizing ambient quality-based numeric standards has been approved by the EPA on multiple occasions, and most recently on October 2, 2017.

The application of additional numeric standards to Collom Gulch, Little Collom Gulch, Ben Morgan Creek, Boxelder Gulch, Hale Gulch, and Jubb Creek will enhance protection of aquatic life uses in these Yampa River tributaries (e.g., in cases where a new/expanded discharge is proposed). Because they are consistent with 40 C.F.R. § 131.11, the revisions to the aquatic life numeric standards for Yampa River segment 3g are approved, subject to ESA consultation.

Temporary Modifications (Aquatic Life Use Classifications)

The expiration date for the copper temporary modification assigned to Lower Colorado segment 4e (Dry Creek) was extended from December 31, 2019 to June 30, 2021, based on a proposal submitted by Tri-State Generation and Transmission Association, Inc. The Dry Creek copper temporary modification was first adopted in 2008. This is the fourth time it has been extended.

The additional eighteen months will provide more time for collection of ambient water quality samples. The enhanced dataset is expected to support derivation of a scientifically defensible site-specific copper standard based on Biotic Ligand Model copper toxicity predictions. The extension will allow for compilation of a more robust ambient dataset that more fully characterizes spatial and temporal variation for dissolved copper and the BLM input parameters. The EPA recognizes that compiling an appropriate dataset has been challenging at this site, given that the Rifle Station discharge is intermittent and Dry Creek is an ephemeral stream that flows only following precipitation or discharge events. The EPA is aware that compilation of field pH data has been especially problematic.

The study plan (Tri-State Exhibit 13) calls for:

- 1) continued sampling at four monitoring sites in the Dry Creek drainage,
- 2) evaluation of paired field and laboratory pH measurements (to determine whether there is a relationship, and whether field pH can be estimated for samples lacking accurate field pH measurements),
- 3) identification of strategies to control copper sources or treatment alternatives, and
- 4) evaluation of whether compliance with WQBELs based on the copper TVS is feasible.

The alternatives analysis work is important, in EPA’s view, because it will put Tri-State in position to move swiftly to improve the quality of its discharge, if necessary and appropriate, once the uncertainty about the copper standard is resolved at the December 2020 temporary modification review hearing. In addition, low cost control alternatives may be identified that can be implemented by Tri-State immediately, while the temporary modification is still in effect (consistent with the requirement at 31.7(3)(d) to maintain and protect existing uses and the current condition of the waterbody).

The extension of the copper temporary modification for Dry Creek is consistent with the general policy regarding temporary modifications in *Basic Standards and Methodologies for Surface Waters* (Regulation #31, Section 31.7(3)). The Basic Standards rule provides latitude to consider changes to expiration dates, provided that “in making a decision as to whether a temporary modification should be removed or extended, the Commission will consider the existence of an implementation plan for eliminating the need for the temporary modification, the

progress being made in trying to implement such a plan, the impact of the temporary modification on the uses of the stream in the area of the temporary modification and upstream and downstream of that area, and all other relevant factors.” The EPA’s regulation at 40 C.F.R. § 131.13 provides that such general policies may be adopted at State discretion, subject to the EPA’s review and approval. Colorado’s general policy authorizing temporary modifications has been approved by the EPA on multiple occasions, and most recently on October 2, 2017. EPA Region 8 approves the extension of the temporary modification, without condition.